

Do Public Sector Employees in Iowa Earn More Than Private Sector Employees?

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Introduction

We are occasionally asked whether public sector employees in Iowa earn more than private sector employees. The issue of public and private sector worker compensation inevitably crops up during periods of labor negotiations or during periods of governmental stress when all public costs are placed under scrutiny. This research reveals that, when controlling for full-time and year-round workers and the average education of workers, private sector workers are compensated at higher rates than public sector workers.

There are several ways to compare earnings between the public and the private sector. Public sector average earnings can be compared to different industry averages, like manufacturing or the finance industry; the public sector can be compared to the entire nonfarm private sector, the most common basis of comparison; and different categories of public sector workers by major occupation group can be compared to similar groups in the private sector. For example, public truck drivers or clerical workers can be compared to private workers with the same occupations.

Each of these approaches provides only a partial answer to the issue of state versus private employee compensation for several reasons. First, the private sector is much larger and has a much more diverse array of jobs than the public sector. Simply on the face of it, one has to assume that the “average” jobs in the public sector and the private sector are substantively different. Second, the private sector has a large number of part time and partial-year jobs, while the public sector primarily employs persons full-time and year- round. Having a substantially higher fraction of part-time, part-year jobs in the private sector, many of which are likely to be earning at the bottom of society’s pay scale, reduces the average wage. Third, there are historically substantial differences in the mean qualifications of workers in the private sector and in the public sector. In the private sector, there are proportionately more workers with only a high school diploma or less, while the public sectors employ proportionately more workers with college degrees. Fourth, many public sector employees do very different tasks than private sector

employees. The private sector does not have judges, the public sector does not have investment bankers.

One way to be more fair when comparing the two sectors is to control for the educational demands of jobs in government and in private industry. Another control that would aid in the comparison would consider whether the jobs that were being measured were primarily full-time and year-round. The kinds of data that are routinely analyzed on this topic, however, do not allow us to consider these factors.

Researchers need survey data to determine attributes of individual workers. During the 2000 Census of Population and Housing, five-percent of Iowans were required to complete what is termed the “long form.” This long census survey is a more detailed inquiry into Iowans’ economic, housing, and family characteristics. Those data are made available as part of the Public Use Micro-Sample files or PUMS and are relied upon for this analysis.

Analyzing the Public Use Micro-Sample Files

The PUMS data for Iowa were obtained from the U.S. Bureau of the Census. For this particular analysis, those data were trimmed to only include persons that were employed during 1999 (the economic year preceding the U.S. census). We selected just a small subset of the myriad amount of data available. Variables pertinent to this report included total earnings (earnings are wage and salary payments for work and returns realized by self-employed persons), average weekly hours worked in the previous year, the number of weeks worked, the type of sector in which the respondent worked (private, local and state government, etc), and the education level of the respondent.

In order to eliminate the wage-distorting effect of the private sector’s reliance on many part-time and seasonal workers, we chose only Iowa workers in our sample who worked at least 30 hours per week and a full 30 weeks during the previous year. This yielded a working sample of 56,458 respondents. We then calculated the average weekly wage for each worker in the private sector and the public sector in Iowa.

The Census Bureau also provides sets of “weights” with these variables. These weighting factors may be used to estimate the total number of these individual statewide. This working sample of 56,458 persons in 2000 is intended, according to the Census Bureau’s weights, to represent the characteristics of 1,145,286 Iowans who would have fit the primary criteria in this analysis:

persons who worked at least 30 hours a week and persons who worked 30 weeks or more during 1999.

The Findings

Five accompanying graphs summarize the findings. In Figure 1 we see that the private sector* contained the vast majority of Iowa’s full-time, year-round workers – nearly 86 percent. Local government contained 6.4 percent of the surveyed (and weighted) full-time and full-year workers, and state government had 5.8 percent. The remainder, not displayed, are federal workers who are just 2 percent of total.

Figure 1

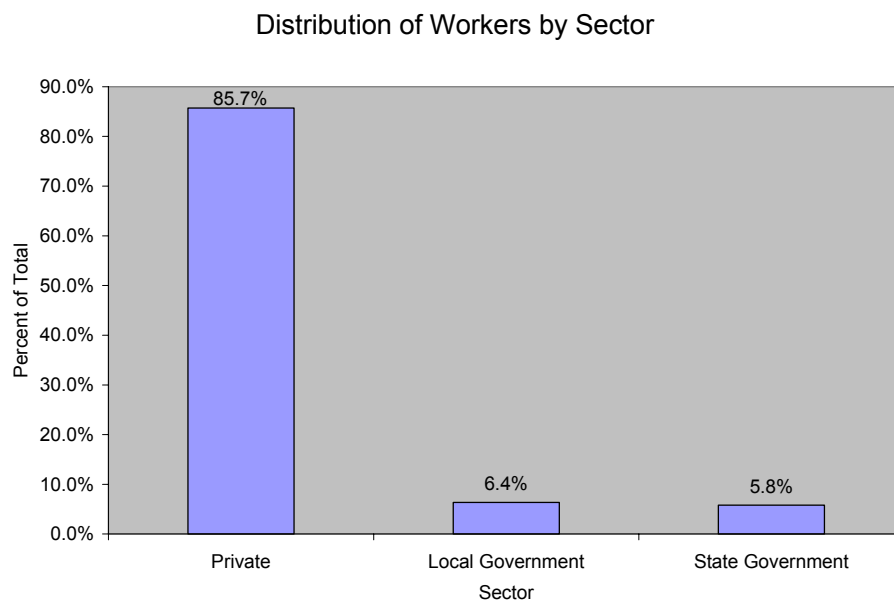


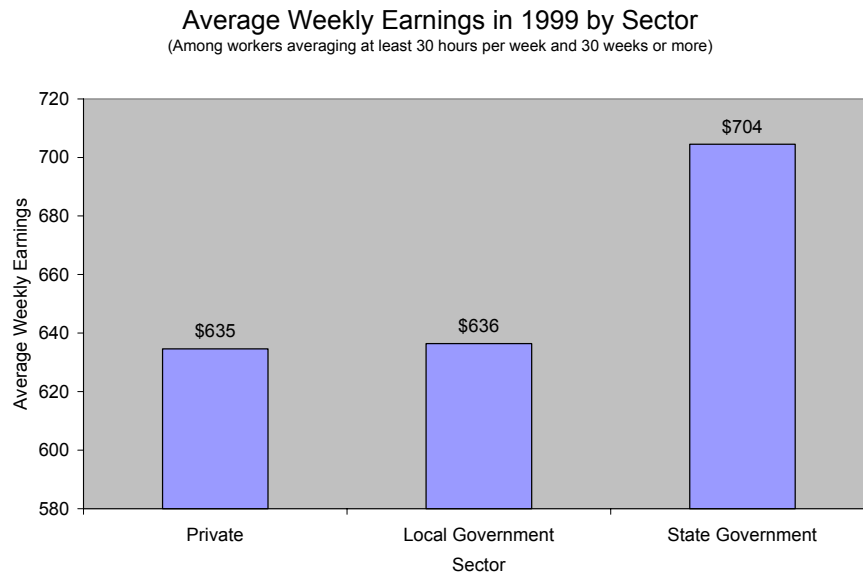
Figure 2 displays the average weekly earnings for all workers in the private and public sectors.** This figure shows that the average weekly earnings for private sector workers in 1999 was \$635,

* The “private sector” includes all persons working for non-governmental entities along with self-employed persons. The public sector contains separate estimates for local government workers – those working for cities, counties, and schools, primarily, and those who work for state government. Federal workers were excluded from this comparison as they are not, generally, part of this discussion at the state level and only constitute a very small percentage of estimated Iowa workers.

** There are three comparative values that could be chosen for this analysis: (1) the average weekly earnings, the figure derived from simply averaging all respondents’ average weekly amounts; (2) the weighted average weekly earnings, an amount obtained by summing all earnings in a category and dividing by the sum of all weeks worked; and (3) the median weekly earnings amount for each group, the amount that represents the distributive mid-point in our comparison groups – the point where half of the respondents are above and half below that value. This latter value could be termed a “median worker” amount.

for all local government workers it was \$636, and for state government workers it was \$704 – \$69 dollars per week more than the private sector average. A cursory view of these data would indicate that, in fact, the average person in state government, but not local government, made substantially more than the average worker in the private sector.

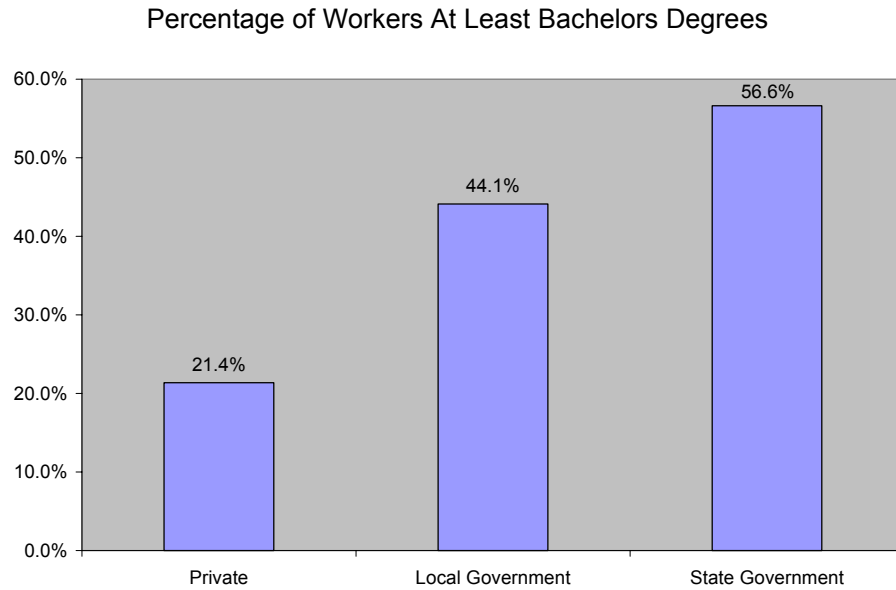
Figure 2



There is, however, a large difference between the average education level of our private and our public sector workers. In the private sector, among our sample of workers, 21 percent have a bachelors degree or better, compared to 44 percent for local government and nearly 57 percent for state government. Those data are illustrated starkly in Figure 3. State government workers are more than two and half times as likely to have a bachelors degree or higher educational attainment than a private sector worker. One would expect the different average education levels of workers to be reflected in their average earnings.

This analysis, however, is not concerned with the median worker; instead, we are addressing the average weekly wage earned by all workers in each measured category in the private and the public sectors. In this assessment, we've chosen to use the average weekly earnings value instead of the weighted value.

Figure 3

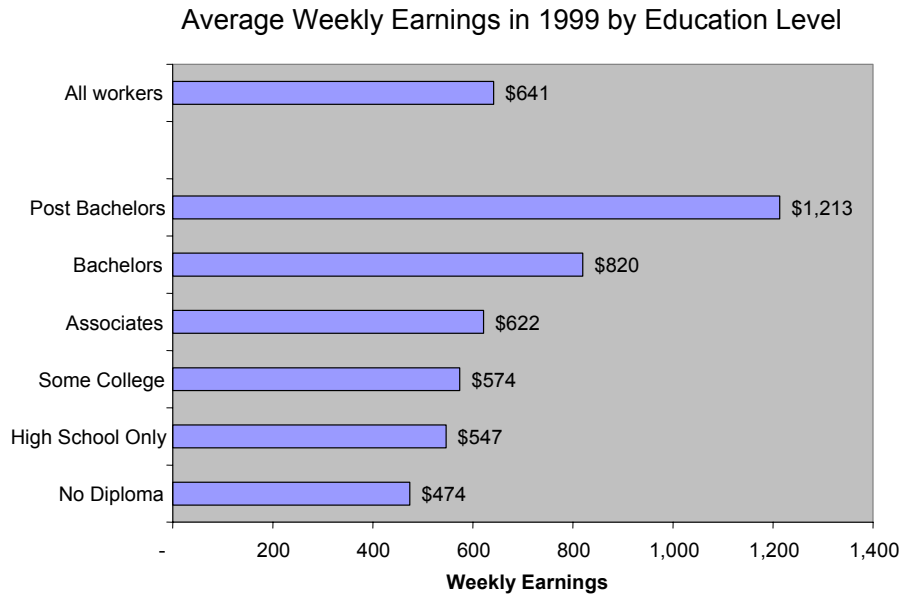


We can independently determine the overall wage-benefiting effects of higher education for Iowa workers. Those effects are clearly displayed in Figure 4. The average weekly earnings amount for our sample group of full-time, year-round workers in 1999 was \$641 a week. Workers without a high school diploma in Iowa averaged just \$474 per week -- \$167 less than the overall average or nearly \$8,700 less per year. Workers with a high school diploma averaged \$547 a week, or about \$4,900 less yearly.

Those with bachelors degrees, in contrast, earned \$179 more than the state average per week or \$9,300 more yearly. Finally, about 7.4 percent of our sample had degrees beyond a bachelors degree. Those workers averaged \$1,213 per week, or \$572 per week more than the average worker. That average weekly differential amounts to nearly \$29,750 more per year than the average Iowa worker would have received.*

* All of the values in this comparison are statistically different from each other at the .05 percent level or better.

Figure 4



The next assessment of the data allows us to control for the education level of our private and public sector workers. Those findings are in Figure 5. Once we consider average education, a much different picture emerges.

Although the average for all workers in each sector indicates that state government workers earn substantially more than private sector workers or local government workers, when we factor in the average earnings received by level of educational attainment of workers the results change. A private sector worker with less than a college degree earned, on average, \$558 per week compared to \$521 for a local government worker with the same education and \$539 for a state government worker. The difference in the local government average was, given the sample size, statistically different from the private sector average. The difference between the private sector and the state government average in this group, however, was not statistically different.*

When we compare workers with just bachelors degrees, which constituted 27.4 percent of state government workers, 30.5 percent of local government workers, and 16 percent of private workers, the distinction between the private sector and the two government categories is pronounced and statistically significant. The private sector averaged \$851 per week per job, local

* Given the respective sample sizes, there is more than a 5 percent chance that there is no difference between the average state government value and the average private sector value in this group. Declarations of “statistical significance” are important because they acknowledge whether a reported difference in a sample is either likely to be representative of the population as a whole or not.

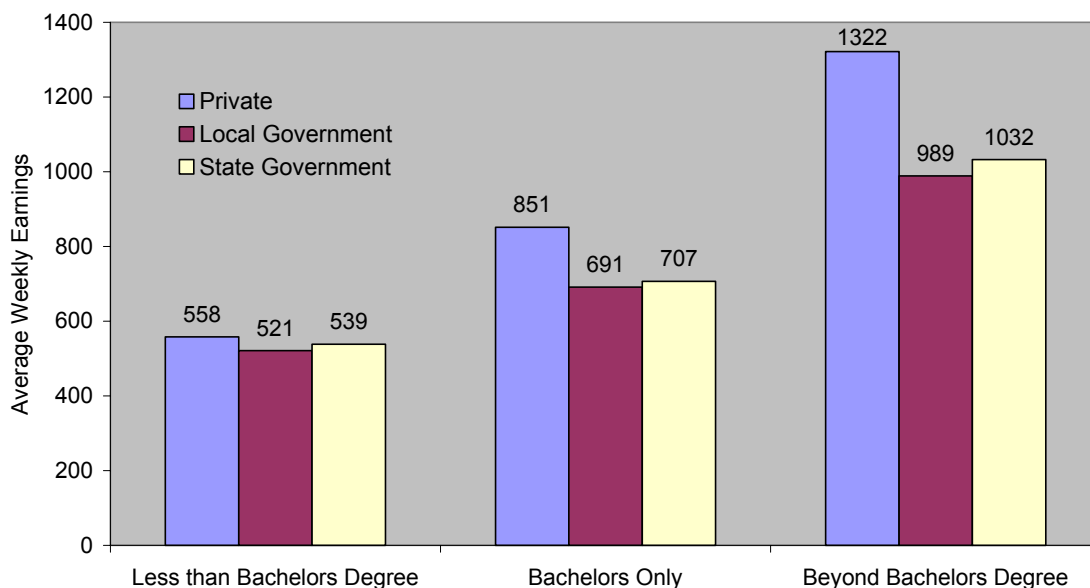
government averaged \$691 per week per job, almost 19 percent less, and state government workers averaged \$707 per week per job, 17 percent less than the private sector.

For those with advanced degrees, the difference between the private sector and both the public sector groups is also statistically significant ($p < .05$). This more educated group was only 5.4 percent of the private workers studied, but 17 percent of local government, and almost 21 percent of state government workers. The private sector averaged \$1,322 in weekly earnings for this group, local government averaged \$989, and state government \$1,032. Private sector compensation in this more exclusive subset of workers was almost 34 percent higher than local government and 28 percent higher than state government workers with advanced degrees.

Figure 5

Average Weekly Earnings by Education Level and Work Sector

(Surveyed Iowans working 30 hours or more weekly and at least 30 weeks in 1999)



Source: Department of Economics, ISU

Conclusion

Do average full-time state and local government workers earn more, on average, than the private sector average worker? The answer, considering all full-time and full-year workers irrespective of educational requirements is: “yes, but.” When we control for the average education level of the workers, in essence comparing private and public sector apples with apples and oranges with oranges, a different picture emerges. For all workers with a bachelors degree or higher, the private sector was significantly more generous than the public sector. For those with less than a

bachelors degree, the private sector paid significantly more than the local government sector, but not a statistically significant amount more than the state government sector.

Persistent claims that the average worker in state or local government earns more than the average private sector worker are, therefore, misleading if the comparisons do not take into account the very simple fact that the public sector requires a much higher average education level than the private sector and that a much larger fraction of public sector employees have college degrees when compared to the private sector. And even though the average public worker typically has more formal education than the average private worker, head to head comparisons by level of education reveal that the compensations received in the private sector of the economy are much greater than in the public sector for those with bachelors or higher degrees. Considering their education levels, most public workers earn less than comparable private workers.